

WE CLAIM:

1. A method of determining a communication identifier for use in a communication network having a predetermined communication protocol comprising:
determining a communication port number corresponding to a particular communication port;
determining a communication type corresponding to the communications port; and
selecting an identifying number for use as the communication identifier that corresponds to the communication port number and to the communication type, the identifying number being selected from a preset group of identifying numbers in which particular bits of each identifying number correspond to a group of preselected communication ports and further particular bits of each identifying number correspond to a group of preselected communication types.
2. A method according to claim 1 wherein a group of low bits correspond to a group of preselected communication ports and a group of high bits correspond to a group of preselected communication types.
3. A method according to claim 1 wherein the communication network is an ATM network.
4. The method of claim 3, wherein six low bits correspond to the group of preselected communication ports and three higher bits correspond to the group of preselected communication types.
5. The method of claim 3, wherein the identifying number is a number identifying a virtual path interface.
6. The method of claim 5, wherein the group of preselected communication ports corresponds to a plurality of optical network terminations or optical network units.

7. The method of claim 6, wherein the group of communication types comprises types selected from the group consisting of UBR, CBR, voice CBR and rt-VBR.

8. The method of claim 3, wherein the identifying number is a number identifying a virtual circuit interface.

9. The method of claim 3, wherein eight low bits correspond to the group of preselected communication ports and three higher bits correspond to the group of preselected communication types.

10. The method of claim 8, wherein the group of preselected communication ports corresponds to a plurality of optical network terminations, optical network units or virtual circuit connections.

11. The method of claim 10, wherein the group of communication types comprises types selected from the group consisting of data ports, TDM ports and OAM ports.

12. The method of claim 10, wherein a group of bits are left unused in accordance with the predetermined communication protocol.

13. The method of claim 12, wherein the group of bits left unused comprise bits corresponding to values of 0-31 in accordance with the ATM communication protocol.

14. The method of claim 1, wherein the communication identifier comprises an ordered pair corresponding to both a virtual circuit connection and an optical network termination.

15. The method of claim 13 wherein one member of the ordered pair comprises a number in which six low bits correspond to the group of preselected communication ports and three higher bits correspond to the group of preselected communication types and the other member of the ordered pair comprises a number in which eight low bits correspond to another group of preselected

communication ports and three higher bits correspond to another group of preselected communication types.

16. The method of claim 15 in which the one member of the ordered pair comprises a first member of the ordered pair and corresponds to a virtual path identifier and the another member of the ordered pair comprises a second member of the ordered pair and corresponds to a virtual circuit identifier in accordance with the ATM protocol.

17. The method of claim 1, wherein the identifying number is selected by reference to a look-up table.

18. An optical communications system comprising:
a communication network having a plurality of communication ports and allowing for a plurality of communication types;
a network controller, functionally associated with the network, that makes use of identifying numbers associated with the plurality of communication ports and the plurality of communication types; and
a processor, configured and arranged to select an identifying number for at least one of the plurality of communication ports or at least one of the plurality of communication types.

19. A system according to claim 18 wherein the processor is configured and arranged to select an identifying number for each of the plurality of communication ports and each of the plurality of communication types.

20. A system according to claim 18, wherein the processor comprises a portion of the network controller.

21. A machine readable medium encoded with machine readable instructions for performing a method of determining a communication identifier for use in a communication network having a predetermined communication protocol, the method comprising:

determining a communication port number corresponding to a particular communication port;
determining a communication type corresponding to the communications port; and
selecting an identifying number for use as the communication identifier that corresponds to the communication port number and to the communication type, the identifying number being selected from a preset group of identifying numbers in which particular bits of each identifying number correspond to a group of preselected communication ports and further particular bits of each identifying number correspond to a group of preselected communication types.